**Obsah**

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1. API Gateway

You can create APIs for use in your own client applications (apps) or you can make your APIs available to third-party app developers.

* REST – stateless
* WebSocket – stateful API specific entity – route. (real time chat app: onConnect, onDisconnect, sendMessage)

A REST API receives message from the client and forwards those to the backend resource. It also forwards responses from the backend to the client. But a Web Socket API supports two-way communication between client apps and your backend. The backend can send callback messages to connected clients. The backed services can independenty send messages to its clients. When REST there is no response withour a request. When WEB Socket it can be.

Swagger – helps developers to build RESTful web services.

Authorization – API Key

* 1. API Gateway Private Endpoints

Requirements:

* A VPC with at least one subnet and DNS resolution enabled.
* A VPC endpoint configured such:

1. Service name = „com.amazonaws.{region}.execute-api“
2. Enable Private DNS Name = enabled
3. A security group set to allow TCP Port 443 inbound from either an OP range in your VPC or another security group in your VPC

* An API Gateway with

1. Endpoint type = „Private“
2. A resource policy giving access to your API from the VPC endpoints.
3. Containers and Orchestration
   1. Hypervisor

A hypervisor or virtual machine monitor (VMM) is computer software, firmware or hardware that creates and runs virtual machines. A computer on which a hypervisor runs one or more virtual machines is called a host machine, and each virtual machine is called a guest machine.

JVM, HyperV

* 1. Middleware

Middleware is multipurpose software that provides services to applications outside of what’s offered by the operating system. Any software between the kernel and user apps can be middleware.

Analyst and system theorist Nick Gall said, "Middleware is software about software." Middleware doesn’t offer the functions of a traditional app, it connects software to other software. Middleware is plumbing for your IT infrastructure because middleware allows data to flow from one app to another. For instance, Apache Kafka is open source middleware that offers real-time data streaming capabilities for your applications.







